

Think

Why must the arcs intersect?

The arcs need to intersect so that you have a point through which to draw a ray.



Problem 4 Constructing the Angle Bisector

Construct the bisector of an angle.

Given: $\angle A$

Construct: \overrightarrow{AD} , the bisector of $\angle A$

Step 1

Put the compass point on vertex A . Draw an arc that intersects the sides of $\angle A$. Label the points of intersection B and C .

Step 2

Put the compass point on point C and draw an arc. With the same compass setting, draw an arc using point B . Be sure the arcs intersect. Label the point where the two arcs intersect as D .

Step 3

Draw \overrightarrow{AD} .

\overrightarrow{AD} is the bisector of $\angle CAB$.



Got It? 4. Draw obtuse $\angle XYZ$. Then construct its bisector \overrightarrow{YP} .

